

Claims

1. A method of interworking between different radio access networks (RAN-A, RAN-B), wherein

5 a radio transceiver device (MS) capable of operating with a first radio access network (RAN-A) and a second radio access network (RAN-B) is attached to said first radio access network (RAN-A); said method comprising the steps of

10 detecting (S11, S21) a service request;

accessing (S121) information on conditions for the first and the second radio access network (RAN-A, RAN-B) for giving sufficient support for a service requested by said service request,

15 analysing (S12, S22) whether or not said first radio access network (RAN-A) and said second radio access network (RAN-B) meets said conditions; and

initiating a handover (S14, S24) of said radio transceiver device (MS) from said first radio access network (RAN-A) to said second radio access network (RAN-B) if the second radio access network (RAN-B) meets the conditions but the first radio access network (RAN-A) does not.

25 2. A method according to claim 1, wherein said conditions comprise a condition whether said requested service exists in the radio access network.

30 3. A method according to claim 1, wherein said conditions depend on each other.

4. A method according to claim 3, wherein one of said conditions for the first radio access network (RAN-A) is a given amount lower than the corresponding condition for
35 the second radio access network (RAN-B).

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5. A method according to claim 1, wherein said method is performed in said radio transceiver device (MS).

5 6. A method according to claim 1, wherein said method is performed in a network control device (MSC, IWU, PNN, BSC_A, BSC_B).

10 7. A method according to claim 6, further comprising the step of informing said radio transceiver device (MS) of the fact that a handover to said second radio access network (RAN-B) is to be initiated.

15 8. A method according to claim 1, wherein said radio transceiver device (MS) is a dual mode phone which is adapted to be operated in said first radio access network (RAN-A) and said second radio access network (RAN-B).

20 9. A method according to claim 1, wherein either said first or said second radio access network is a GSM network.

25 10. A method according to claim 1 or 9, wherein either said second or said first radio access network is a UMTS network.

11. A method according to claim 1, wherein said requested service is a circuit-switched service.

30 12. A method according to claim 1, wherein said requested service is a packet service.

35 13. A method according to claim 1, wherein an error procedure is initiated, when it is detected in said analysing step that said requested service is not available in any of said networks.

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14. A method according to claim 13, in which said error procedure is a notification of the user.

5 15. A method according to claim 1, wherein said radio transceiver device (MS) is attached to said first radio access network (RAN-A) such that it is located in a cell (Cell_A_1) of said first radio access network (RAN-A) and connected by air with said first radio access network
10 (RAN-A).

16. A method according to claim 15, wherein said radio transceiver device (MS) is also located in a cell (Cell_B_1) of said second radio access network (RAN-B).

15 17. A method according to claim 1, wherein said analysing step also analyses whether a subscriber using said radio transceiver device (MS) is entitled to use said requested service.

20 18. A network interworking device for a telecommunication network comprising at least two radio access networks (RAN-A, RAN-B), wherein
a radio transceiver device (MS) capable of operating
25 with said first radio access network (RAN-A) and said second radio access network (RAN-B) is attached to said first radio access network (RAN-A); said device comprising

a detecting means (1) for detecting a service
30 request,
an analysing means (2) responsive to said detecting means (1) and having the functionality of
accessing information on conditions for
said first and said second radio access networks

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(RAN-A, RAN-B) for giving sufficient support for the
a service requested by said service request and
analysing whether or not said first radio
access network (RAN-A) and said second radio access
5 network (RAN-B) meet the conditions, and
initiating means (3) responsive to said analysing
means (2), the initiating means (3) being adapted to
initiate a handover of said radio transceiver device (MS)
from said first radio access network (RAN-A) to said
10 second radio access network (RAN-B) if the respective
conditions are not met by said first radio access network
(RAN-A) but by said second radio access network (RAN-B).

19. A network interworking device according to claim 18,
15 wherein said interworking device is arranged in said
radio transceiver device (MS).

20. A network interworking device according to claim 18,
wherein said interworking device is arranged in a network
20 control device (MSC, PNN, IWU, BSC_A, BSC_B).

21. A network interworking device according to claim 18,
wherein said analysing means (2) is connected to a
database (4) for obtaining information regarding said
25 conditions of said requested service.

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